

Before the
Federal Communications Commission
Washington, D.C. 20554

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SEP 10 2001

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)
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)
Joint Application by SWBT Communications,)
Inc., Southwestern Bell Telephone Company,)
and Southwestern Bell Communications)
Services, Inc., d/b/a/ Southwestern Bell)
Long Distance for Provision of In-Region,)
InterLATA Services in Arkansas and Missouri)

CC Docket No. 01-194

EXHIBITS TO THE COMMENTS OF AT&T CORP.

September 10, 2001

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**DECLARATION OF MICHAEL LIEBERMAN
ON BEHALF OF AT&T CORP.**

**BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554**

In the Matter of

Application by SBC Communications Inc.,)	
Southwestern Bell Telephone Company,)	CC Docket No. 01-194
And Southwestern Bell Communications)	
Services, Inc. d/b/a/ Southwestern Bell Long)	
Distance For Provision of In-Region,)	
InterLATA Services In Arkansas and)	
Missouri)	

**DECLARATION OF MICHAEL LIEBERMAN
ON BEHALF OF AT&T CORP.**

I. Background and Summary

1. My name is Michael R. Lieberman. I am a District Manager in AT&T's Law and Government Affairs organization. In this position I am responsible for providing financial and industry analysis support relating to the costing and pricing of local telecommunications services. I was AT&T's primary participant in the development of the HAI/Hatfield Model of forward looking economic costs of local exchange networks and services and have been responsible for evaluating other costing models and methodologies such as the BCPM and the FCC's Synthesis Model. I have a Bachelor's degree in mathematics and a Master's degree in statistics from the State University of New York at Stony Brook. Prior to joining AT&T as a statistical consultant in 1978, I was a bio-statistical consultant with Carter-Wallace of Cranbury, New Jersey. My testimony evaluates whether the prices charged by SWBT in Missouri for UNEs are compatible with TELRIC principles and whether the profit potential for residential UNE-P competition in SWBT Missouri territory can support broad-based competition for the provision of local telecommunications services to residential customers.

2. As I demonstrate below, the conditions necessary to support residential competitive entry in Missouri do not exist because SWBT's Missouri UNE rates are far too high to support mass-market UNE-based retail offerings. This result holds true even when all revenues and benefits that could be incrementally obtained from providing UNE-based local services (*e.g.*, the sale of vertical services) are considered.

3. Moreover, SWBT's UNE rates in Missouri significantly exceed those in Kansas. That is true notwithstanding that the cost of providing loops in Missouri is about the same as in Kansas (based on the same type of Synthesis Model relative cost comparisons endorsed by the Commission in the recent section 271 orders). SWBT's contends that its Missouri rates do compare favorably with its Texas rates on a cost-adjusted basis. As I detail below, however, that only confirms that SWBT's Missouri rates are significantly inflated, because SWBT Texas rates are based on pre-1997 cost estimates and the relevant costs have declined precipitously since 1996. Thus, even if SWBT's Texas (and Missouri) rates approximate 1996 forward-looking costs (and SWBT has not established that they do), those rates far exceed properly computed 2001 forward-looking costs.

II. Missouri Margin Analysis

4. Even after SWBT's recent unilateral reductions of a handful of its state-approved UNE rates, residential UNE-based retail competition is not viable in Missouri. The viability of a UNE-based offering – that is, whether it makes sense for AT&T (or any other entrant) to commit its shareholders' capital to that enterprise – turns on the same type of analysis as any other investment decision. Capital is scarce and must be devoted to its highest-valued uses. Thus, a carrier considering whether to enter the local services business in a state (or to continue to participate in that business) must determine whether revenues attributable to the service will exceed the costs of providing the service by an amount sufficient to generate a return that is

commensurate with the expectations of investors concerning risks and returns and with competing uses for the capital.

5. There are essentially three steps to any such analysis: (1) identifying and estimating each of the costs of providing the service, (2) identifying and estimating each of the revenue opportunities that will be generated by providing the service, and (3) deriving from these estimated “cash flows” some standard financial measure that allows the investment opportunity to be assessed (and compared to alternative investment opportunities).

6. Because telecommunications carriers are subject to numerous reporting requirements, obtaining the inputs necessary to conduct my analysis was straightforward. Carrier-specific data, including retail local service prices, UNE prices, and access prices are largely publicly reported and directly verifiable. I am confident, therefore, that the following analysis paints an accurate picture of the barrier that SWBT’s UNE prices in Missouri pose to residential competition in that state.

7. The remainder of this section is organized as follows. First, I describe the costs associated with a residential UNE-Platform offering in Missouri. Second, I describe the revenues that are available to carriers serving customers in Missouri. Third, I translate these cash flows into margins by looking at the difference in a Missouri entrant carrier’s revenues and costs – a type of financial measure commonly used by businesses to make investment decisions. This margin analysis shows that profitable UNE-Platform-based offerings cannot be undertaken by competitive carriers in Missouri at the rates contained in SWBT’s application. Exhibit 1 to my declaration, entitled “UNE Connectivity Margin for SWBT Missouri,” summarizes the results of my cost, revenue and margin analysis. I refer to, and generally follow the order of this

Exhibit 1 in the discussion below. I also refer to supporting Exhibits 2-10, which provide additional detail on the assumptions and calculations underlying Exhibit 1.

8. **Costs.** There are two basic categories of costs associated with UNE-Platform-based services: (1) “connectivity” costs (*i.e.*, the costs associated with purchasing the necessary network elements from the incumbent), and (2) a carrier’s own internal costs of running a local telephone service business (*e.g.*, developing, maintaining and operating computer support systems, as well as marketing, customer care, and administration). My analysis focuses primarily on the former category of costs, which are readily identifiable and verifiable.

9. The M2A clearly identifies SWBT’s Missouri loop rates. The M2A rates for UNE loops are \$12.71/month in Zone 1, \$18.64 in Zone 2, \$19.74 in Zone 3 and \$16.41 in Zone 4. For UNE switch ports, new entrants pay \$1.74/month in Zone 1, \$1.97 in Zone 2, \$2.47 in Zone 3 and \$2.25 in Zone 4. These and the other relevant M2A rates are listed in Exhibit 2 to my declaration.

10. Most other network elements required for local service are charged on a usage basis. Therefore, it is necessary to combine published per minute rates with usage volumes to estimate the cost of the other network elements. Missouri usage volumes are available from SWBT’s annual “dial equipment minutes” (“DEM”) submissions to NECA (the same data that is used in the Commission’s Synthesis Cost Model). SWBT’s 1999 reported DEM can be converted to 2001 DEM per line by adjusting upward the 1999 per line statistics by the annual growth rate between 1998 and 1999. For the toll-related categories (which includes access and intraLATA toll MOU), where a CLEC pays for both the originating and terminating minutes, the total DEM per line can be split between originating and terminating minutes. Therefore, I have divided the total DEM per line numbers by two. This calculation of “usage minutes” retains the

non-conversation time that is reflected in DEM and which is included in the cost of UNEs. Also, because bill and keep rules apply to local usage on Missouri UNE-P lines, only originating local traffic is relevant for usage on these lines and the originating/terminating split becomes important. Therefore, I use a relationship between originating and total traffic, based upon proprietary AT&T data, to estimate a consumer outbound local MOU per line amount.¹ These calculations for local, intraLATA toll, intrastate interLATA, and interstate usage are detailed in Exhibit 3 to this declaration.

11. For each category of usage (*e.g.*, local, intraLATA toll, etc.) particular network architecture assumptions must be applied. Local usage must be apportioned to reflect the fact that some local calls are “intraswitch” calls (where the calling and called parties are served by the same switch), some are “interswitch” calls. Interswitch calls require assumptions regarding the portion of these calls that are routed directly between the two switches and those that are routed via a tandem. According to the Commission’s Synthesis Model, approximately 2 percent of local interswitch minutes and 20 percent of intraLATA toll and interLATA minutes are tandem-routed. Approximately 35 percent of local calls in SWBT’s network are assumed to be intraswitch calls.² The calculated intraswitch, interswitch, and tandem conversation minutes (or, in the case of toll calls, the toll direct and toll tandem conversation minutes) are then multiplied by the corresponding M2A usage charges to arrive at expected monthly usage costs per line, as

¹ Because of the higher degree of outbound MOU relative to inbound MOU in typical residential use, reflecting a bill and keep regime lowers the level of the UNE usage cost. Because I understand that Missouri now operates on a bill and keep regime, my analysis reflects this cost savings.

² Although the Commission’s Synthesis Model recognizes that about 50 percent of local calls would be intraswitch calls in an efficiently designed network with properly sized switches, the relevant figure for a new entrant contemplating entry is what it will actually pay SWBT. Because SWBT’s existing network is not efficiently designed and sometimes uses two switches

detailed in Exhibit 4 to my declaration.³ The total monthly usage charges per line, which are listed in Exhibit 5, are \$2.98 in Zone 1, \$3.62 in Zone 2 \$5.11 in Zone 3, and \$4.24 in Zone 4.⁴

12. Although DUF charges (or “Daily Usage Feed”) are generally inappropriate as they double-recover costs, SWBT adds those charges in many of its states. I have included this DUF charge on Exhibit 6 as the DUF (or “Daily Usage Feed”) charge of \$1.09/month (for the reports provided by SWBT). This figure is a function of the number of records multiplied by a per record rate of \$0.003.⁵ The final recurring cost item in the margin analysis, white pages delivery, is displayed on Exhibit 7. This is an annual charge imposed by SWBT that has been translated to a per-month equivalent charge of \$0.42.

13. In total, the average recurring monthly connectivity costs (loop plus usage plus DUF and white pages) incurred by SWBT to serve a Missouri customer is \$22.12. This is an average of the monthly connectivity costs for Zone 1 (\$19.06), Zone 2 (\$25.56), Zone 3 (\$28.62) and Zone 4 (\$24.54) weighted by the relative number of estimated residence lines in each zone served by SWBT. *See* Exhibit 1. When the M2A non-recurring charges of \$46.34 for new customers (assumed to be 10% of CLEC orders)⁶ and \$5.00 for migration (assumed to be 90% of

where one would be more efficient, the 35 percent figure must be used to determine expected connectivity costs that will be billed by SWBT to the competing carrier.

³ The signaling charge calculations, a very small portion of total usage charges, are also contained in Exhibit 4. As signaling is assessed per message, an estimate of messages per minute is developed and is applied to the message rate.

⁴ UNE purchasers must pay switching, transport and related usage charges for access-related usage whether a call is originated or terminated by their customer, and the assumption is that the customer receives as much access traffic as he or she originates. For intraLATA toll traffic, every originating minute is associated with a terminating minute to another customer (for simplicity assumed to be served by the same ILEC) in the ILEC’s service area.

⁵ While the M2A rate sheet does not currently reflect a charge for DUF, I reflect one because the ICA indicates that SWBT will charge for it.

⁶ Because our experience is that a much larger percent of orders incur the more expensive new order charge, the 10% assumption is extremely conservative.

CLEC orders) are added and amortized over three years, the average total monthly platform cost in Missouri is \$22.37 (and ranges from \$19.31 in Zone 1 to \$28.88 in Zone 3).

14. **Revenues.** The SWBT local service rates that UNE-Platform-based providers can obtain for their services are effectively capped by the retail rates charged by SWBT. If new entrants attempt to charge higher rates than SWBT, these new entrants would be unable to attract customers. SWBT local service rates are readily available and verifiable from many sources, including CCMI. SWBT also offers an optional service, Metro Calling Area (MCA) service, that allows for 2-way calling to an extended area. For selected customers, the CLEC may be able to charge for this MCA service, thus I include it here. Mapping the local rates to wire centers and mapping the wire centers to UNE zones results in CCMI rates that range from \$10.47/month in Zone 4 to \$14.02/month in Zone 2.⁷

15. There are, of course, other revenue opportunities available to new entrants. A local service provider can expect to sell vertical features to many customers. The rates that new entrants are likely to obtain for these services can be determined from SWBT's tariffed rates for these services. Those rates, adjusted for penetration levels, are depicted in Exhibit 1. Based upon 4Q00 ReQuest market research data provided by TNS (formerly PNR), SWBT's Missouri penetration rates for Caller ID, Call Waiting, and Call Forwarding are 44 percent, 34 percent and 19 percent, respectively. Thus, a new entrant can expect, on average, to receive about

⁷ These values reflect retail rates as reported by CCMI Rate Information, Section 3.1, Sheet 3 (effective September 30, 2000) and are listed in Exhibit 9. Based upon TNS market research and analysis of WC-level data, an MCA penetration rate of 62% was assumed and flowed through at the WC level and is subsumed in the basic local revenue that is reflected in the analysis. The rates by wire center are weighted together to estimate the average basic local service revenue per line by UNE zone as listed in Exhibit 10.

\$7.06/month in vertical feature revenue.⁸ The federal Subscriber Line Charge brings in an additional \$4.68/month/line. Total expected customer revenues, therefore, average a little more than \$24/month (ranging from low of \$22.21 per month in Zone 4 to a high of \$25.76 per month in Zone 2).

16. A UNE-Platform-based provider also earns access revenues for originating and terminating long-distance calls. This revenue may either be explicit (when a CLEC charges an independent IXC, or implicit if the CLEC acts as its own IXC). To estimate these access revenues it is necessary to multiply expected toll minutes (derived from the SWBT's DEM data) by the relevant access charges (obtained from SWBT's intrastate and interstate tariffs) that AT&T can replace with UNEs.⁹ My calculations shows that a UNE-Platform entrant's estimated monthly per line access charge revenues are \$2.56/month. *See Exhibit 8, attached.*

17. Adding all of these revenues, AT&T (or another entrant) could expect to receive \$26.69/line/month from residential UNE-based service in Missouri (or between \$24.76 and \$28.32 /line/month, depending upon the density zone).

18. **Margin.** There are many standard financial measures for assessing the profitability of investing (or continuing) in a line of business. The margin per line can be computed by comparing a carrier's expected costs with its expected revenues for each line. A "gross" UNE-P margin can be determined by subtracting expected direct connectivity costs from expected revenues. A "net" UNE-P margin can only be determined by subtracting all expected

⁸ This vertical feature revenue estimation is based upon an a la carte approach. Because a portion of the reported feature penetration would have been part of SWBT's offering of discounted bundles, this revenue is overstated relative to these features.

⁹ Dedicated transport access charges are not included because AT&T does not avoid these access charges through its acquisition of a UNE-P local customer.

costs (connectivity and internal/“running the business”) from expected revenues. But even the gross margin is *negative* in two of the four Missouri rate zones.

19. To be sure, the gross margin is positive in zones 1 and 2, but still inadequate to support positive net margins and UNE-based entry after internal costs are considered – as they must be in determining whether it makes sense to market UNE-Platform-based local services. These internal costs include marketing, customer service, billing, order processing, and other operating activities and exceed \$10 per line per month.

20. Moreover, it is important to recognize that even the apparent positive gross margins in Zones 1 and 2 are frail and unreliable. This is because SWBT’s retail rate structure is the reverse of cost-based. In particular, SWBT currently charges relatively higher retail rates to end-users in its urban zones (*e.g.*, its metro rate zone) in order to support its operations in the more rural zones. Therefore, if CLECs attempted to focus their entry on the metro zone, SWBT could rebalance its retail rates in order to better reflect its costs by reducing its metro zone rate. Thus, margins that competitors may have obtained in urban zones could be significantly reduced.

III. Comparing Missouri’s UNE Loop Rates to Other SWBT States Confirms that Missouri Rates Are Not Cost-Based.

21. Even with the minor arbitrary reductions to some of its already inflated loop rates, SWBT’s Missouri loop rates still exceed those of Kansas (by 11%) and Arkansas by 7%. *See* Exhibit 11. These rate differences are not explained by costs. According to the Commission’s Synthesis Cost Model (“SynMod”),¹⁰ the costs of providing loops in Missouri is about the same

¹⁰ Adjustments to the FCC loop cost are necessary because the FCC SynMod includes all per line costs, for all UNEs, including the retail portion on the UNE Network Interface Device (NID). To remove those additional costs, as required by the FCC’s TELRIC rules, I made three adjustments to the SynMod. First, the retail component of the FCC per-line overhead expenses was subtracted. Second, the remaining per-line expense was spread across UNEs as a function of relative investment – the FCC also used relative investment to assign the per-line expense to

as those Kansas, but significantly lower than Arkansas. When the nominal rate differences between Missouri and Kansas and Arkansas, are adjusted for relative cost differences, the Missouri rate excesses become 10% and 32% respectively. *See* Exhibit 11.

22. SWBT attempts to justify its inflated Missouri rates by comparing them to those in Texas.¹¹ But even if (contrary to fact) SWBT's Texas cost studies resulted in TELRIC-compatible rates for the year in which they were computed, those rates would not satisfy TELRIC standards today. Accordingly, SWBT's Texas rates cannot (today) reasonably be used to justify rates in other states, including Missouri.

23. The fact that SWBT's Texas rates do not comply with TELRIC standards today is indisputable. The forward-looking unit costs of providing UNEs have declined continuously over the past several years due to both increases in demand and improvements in technology.

24. A simple analysis of SWBT's Texas net cable and wire (C&W) investments¹² and its access lines reveals that net C&W investments declined significantly on a per-line basis

the loop UNEs in the Kansas Oklahoma federal 271 proceeding. Third, the per-line expenses were translated from 1998 to 2001.

¹¹ Of course, the Commission should not allow BOCs (including SWBT) to justify newly proposed rates by comparing them to rates in states, such as Oklahoma, that were themselves justified by such a comparison. For example, the Commission approved SWBT's Oklahoma UNE loop rates because they fell within some "reasonable range" above those in Texas. To now assess Missouri's rates based on Oklahoma rates would increase its "range of reasonableness," even though no new information is available to support such an increase. The result of that analysis would be an impermissible widening of that "range of reasonableness." In its *Kansas/Oklahoma 271 Order* (§ 79 n. 238), for example, the Commission found that Oklahoma's transport rates, which exceeded those of Texas by 37% were within a "reasonable range." The Commission should not now justify another state's transport rates because those rates are 37% above Oklahoma's rates.

¹² Because SWBT does not file Texas-specific depreciation data for C&W, I used SWBT's five-state C&W reserve ratio.

between 1992 and 1999.¹³ In fact, between 1992 and 1999, net C&W investment grew much slower than access lines, resulting in an overall decline of 36 percent from 1996 to 2001.¹⁴ This unit cost decline far exceeds the percentage by which the cost-adjusted Missouri loop rates are below Texas loop rates,¹⁵ which strongly indicates that the SWBT's Missouri loop rates are not TELRIC-compliant even if the original Texas rates had been TELRIC-compliant.

25. Analysis of SWBT ARMIS data also provides strong evidence that SWBT's switching unit costs have plummeted since 1996, and given the vintage of SWBT's Texas cost study, the most recent demand data that the SWBT's current Texas usage rates could have been based on are 1996 rates.¹⁶ Analysis of SWBT's Texas net switch investments¹⁷ and its dial

¹³ In spite of the fact the SEC-filed total lines continue to show significant growth, the ARMIS data reflects a decline—a reporting issue probably reflecting exclusion of certain types of line for which the investments continue to be reflected in the ARMIS data.

¹⁴ Texas estimated net C&W remained essentially flat (\$3.75B to \$3.78 B) over the 1992 to 1999 timeframe while total lines grew 87% (7.3M to 13.6M which result in a negative 7.4% long term CAGR in net C&W investment per line). See Exhibit 12 (attached). In conjunction with the nominal decline in C&W investment per line of 22% from 1996 to 1999, this implies a 36% overall decline from 1996 to 2001. Missouri data reflects the same phenomenon with C&W investment per line declining over the 1992 to 1999 timeframe at a 6.7% CAGR, a decline of 18% from 1996 to 1999, yielding an estimated decline in cost from 1996 to 2001 of 31%.

¹⁵ The cost adjusted Missouri loop rates are 11 percent below the Texas loop rates.

¹⁶ This Commission has already explicitly recognized that fact that switching is on a steep declining cost curve. See, e.g., Order on Remand and Report and Order, *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996 and Inter-carrier Compensation for ISP-Bound Traffic*, CC Dockets No. 96-98 and 99-68, FCC 01-131, at 84, n. 157, 93 (April 27, 2001) (citing Letter from David J. Hostetter, SBC, to Magalie Roman Salas, Secretary, FCC (Feb. 14, 2001), Attachment (citing September 2000 Morgan Stanley Dean Witter report that discusses utilization of lower cost switch technology); Donny Jackson, "One Giant Leap for Telecom Kind?," *Telephony*, Feb. 12, 2001, at 38 (discussing cost savings associated with replacing circuit switches with packet switches); Letter from Gary L. Phillips, SBC, to Magalie Roman Salas, Secretary, FCC (Feb. 16, 2001) (attaching press release from Focal Communications announcing planned deployment of next-generation switching technology "at a fraction of the cost of traditional equipment").

¹⁷ Because SWBT has not filed Texas-specific depreciation data for switching, I used SWBT's five-state switching reserve ratio.

equipment minutes (“DEMs”) reveals that net switch investments have declined on a per-minute-of-use basis for the past 9 years and that net switch investment has grown much slower than DEMs.¹⁸ The slow growing net switch investment, combined with the explosive increase in minutes, would suggest that there had been a 28 percent decline in switching investment per DEM between 1996 and 2001. *See* Exhibit 13.

26. Put simply, to the extent that SWBT’s Missouri’s rates are comparable to those in Texas, that only confirms that SWBT’s Missouri rates are similar to rates developed on significantly outdated (and, by today’s standards, inflated) costs. That comparison strongly suggest that SWBT’s Missouri rates are not, by today’s standards, cost-based.

27. It should be noted that a similar ARMIS analysis of Missouri costs produces similar results as that for Texas. (Exhibits 12 and 13)

28. Based on the foregoing, SWBT’s Missouri rates are clearly well above those that any reasonable application of TELRIC principles would have produced.

IV. Conclusion


29. A straightforward margin analysis clearly shows that current UNE prices in Missouri are too high to support mass-market UNE offerings by competing carriers. Even taking full account of all the revenues and benefits of being a local service provider, it is profoundly uneconomic for AT&T (or any other entrant) to make a consumer offer of UNE-P based local services in Missouri. At the same time, SWBT’s Missouri UNE loop rates are significantly

¹⁸ Texas net CO switch investment grew 22% (\$1.75B to \$2.14 B) over the 1992 to 2000 timeframe while DEMs grew 82% (153B to 278B which result in a negative 4.8% CAGR in net investment per DEM). *See* Exhibit 13 (attached). In conjunction with the nominal decline in investment per DEM of 23% from 1996 to 2000, this implies a 28% overall decline from 1996 to 2001. Missouri data reflects the same phenomenon with investment per DEM declining over the 1992 to 2000 timeframe at a 5% CAGR, a decline of 23% from 1996 to 2000, yielding an estimated decline in cost from 1996 to 2001 of 28%.

higher than those in Kansas and Arkansas. And analysis of Texas loop and switch costs demonstrates that the Texas rates are state and greatly in excess of current costs. Thus, comparing SWBT's Missouri rates to those stale Texas rates, is a meaningless test of the status of Missouri rates being TELRIC.

VERIFICATION PAGE

I, Michael Lieberman, declare under penalty of perjury that the foregoing is true and correct.


Michael Lieberman

Executed on September 10, 2001.

EXHIBIT 1

Exhibit 1

Connectivity Margin for SWBT Missouri _ M2A_MCA @62%

New Rates, Full state Bill and keep, MCA penetration at 62% of eligible lines

COSTS	Statewide				
	Average	Zone 1	Zone 2	Zone 3	Zone 4
Zone weights	100%	56%	29%	9%	6%
Loop	\$15.27	\$12.71	\$18.64	\$19.74	\$16.41
Port	\$1.90	\$1.74	\$1.97	\$2.47	\$2.25
Usage	\$3.43	\$2.98	\$3.62	\$5.11	\$4.24
DUF	\$1.09	\$1.09	\$1.09	\$1.09	\$1.09
White Pages	\$0.42	\$0.54	\$0.23	\$0.21	\$0.54
Platform - Recurring Cost	\$22.12	\$19.06	\$25.56	\$28.62	\$24.54
Amortization of NRC Fee	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25
Total Platform (w/NRC)	\$22.37	\$19.31	\$25.81	\$28.88	\$24.79

REVENUES RES @ SWBT

Basic Local Svc Residential

Metro Zone 1	\$11.98
Zone 2	\$14.02
Zone 3	\$10.99
Zone 4	\$10.47
Basic Local Svc -Statewide	\$12.39
Caller ID (Name & Number)	\$3.76
Call Waiting	\$2.70
Call Forwarding	\$0.60
Sub. Line Chg.	\$4.68
Access	\$2.56

Total Revenue

Metro Zone 1	\$26.28
Zone 2	\$28.32
Zone 3	\$25.29
Zone 4	\$24.76
Statewide Weighted Average	\$26.69

<=====>
<=====>
<=====>

Feature Penetration
Rate Assumption
44%
34%
19%

MARGINS \$ Per Month % of Revenue

Metro Zone 1	\$6.97	27%
Zone 2	\$2.51	9%
Zone 3	(\$3.59)	-14%
Zone 4	(\$0.03)	0%
Statewide	\$4.32	16%

EXHIBIT 2

Exhibit 2

SWBT Missouri _ M2A UNE Rates

UNE Element	Zone 1	Zone 2	Zone 3	Zone 4	Average
Loop	\$12.71	\$18.64	\$19.74	\$16.41	\$15.27
Port	\$1.74	\$1.97	\$2.47	\$2.25	\$1.90
Local Switching	\$0.001620	\$0.001949	\$0.002807	\$0.002391	\$0.001867
Common Transport Term per MOU	\$0.000155	\$0.000232	\$0.000246	\$0.000132	\$0.000184
Common Transport Facility per mou per Mile	\$0.000002	\$0.000006	\$0.000012	\$0.000001	\$0.000004
Tandem switching usage	n/a	n/a	n/a	n/a	\$0.001231
Signalling Transport per msg	n/a	n/a	n/a	n/a	\$0.0000006

EXHIBIT 3
(REDACTED FOR PUBLIC INSPECTION)

EXHIBIT 4
(REDACTED FOR PUBLIC INSPECTION)

EXHIBIT 5
(REDACTED FOR PUBLIC INSPECTION)

EXHIBIT 6
(REDACTED FOR PUBLIC INSPECTION)